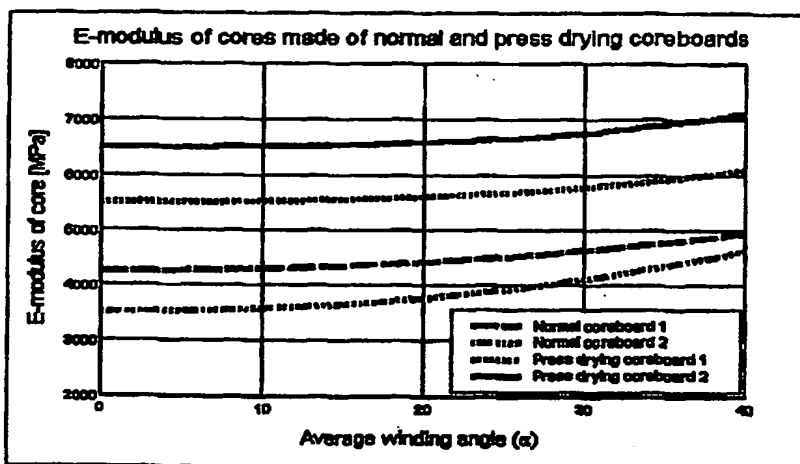




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(21) International Application Number: PCT/FI98/00061 (22) International Filing Date: 23 January 1998 (23.01.98) (30) Priority Data: 970646                      14 February 1997 (14.02.97)      FI U970081                    14 February 1997 (14.02.97)      FI (71) Applicant (for all designated States except US): AHLSTRÖM ALCORE OY [FI/FI]; P.O. Box 100, FIN-48601 Karhula (FI). (72) Inventors; and (75) Inventors/Applicants (for US only): HAAPANIEMI, Jukka [FI/FI]; Vatasentie 44, FIN-49300 Tavastila (FI). JÄRVINEN, Markku [FI/FI]; Hartikantie 19, FIN-49210 Huutjärvi (FI). (74) Agent: AHLSTROM MACHINERY OY; Patent Dept., P.O. Box 18, FIN-48601 Karhula (FI).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i> <i>In English translation (filed in Finnish).</i>	

(54) Title: A STRUCTURAL PLY OF A PAPERBOARD CORE, A PAPERBOARD CORE MADE THEREOF, AND A METHOD OF IMPROVING THE STIFFNESS OF A PAPERBOARD CORE



## (57) Abstract

The present invention relates to a structural ply of a spiral paperboard ply, the cross machine direction (CD) elasticity modulus  $E$  of the structural ply being substantially higher than 4500 MPa. Further, the machine direction (MD) elasticity modulus  $E$  of the structural ply is substantially higher than 7500 MPa ( $N/mm^2$ ). The invention also relates to a spiral core comprising such a structural ply. The present invention further relates to a method of improving the stiffness of a spiral paperboard core. Paperboard cores in accordance with the invention may be manufactured by using, either solely or partly, structural plies according to the invention, the paperboard for making up such structural plies having been manufactured, e.g., with a method called press drying. Paperboard based on the press drying method can be manufactured, e.g., with a board machine employing a so-called Condebelt process. The invention also relates to use of such cores as yarn carriers and as tubes for thin films and foils.